Constituents of Two *Dioscorea* Species that Potentiate Antibiotic Activity against MRSA

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Figure S1: Accumulation of EtBr by *S. aureus* SA-1199B in the Presence of Increasing Concentrations of, from Left to Right; Reserpine, 4, 1 and 2.

Table **S**1: Effect of the Compounds on the Intracellular Accumulation of Ethidium Bromide in the *S. aureus* 1199B strain

compound (1/4 MIC)	S. aureus 1199B (NorA)			
	Δ slope	RFF $(RFF = RF_{treated} - RF_{untreated})^b$		
1	1.04	34.45		
2	2.45	78.89		
4	2.68	89.60		
reserpine	2.88	87.08		

^b [where RFtreated is the relative fluorescence of the treated sample and RFuntreated is the relative fluorescence of the blank



Figure S2: HR-ESI-MS spectrum of 1 in positive ion mode.



Figure S3: HR-ESI-MS spectrum of 2 in positive ion mode.



Figure S4: ¹H NMR spectrum of 1, recorded in benzene-*d*₆, 500 MHz.

Sample Ref Dc chloro8b4 cpd1 (2)



Figure S5: ¹³C NMR spectrum of 1 recorded in benzene-*d*₆, 125 MHz.

Sample Ref Dc chloro8b4 cpd1



Figure S6: DEPT-135 spectrum of 1, recorded in benzene-*d*₆, 125 MHz.





Figure S7: HMQC spectrum of 1, recorded in benzene-*d*₆.





Figure S8: HMBC spectrum of 1, recorded in benzene-d₆.





Figure S9: COSY spectrum of 1, recorded in benzene-d6.

Sample Ref Dc chloro10+11 prep



Figure S10: ¹H NMR spectrum of 2, recorded in benzene-*d*₆, 500 MHz.

Sample Ref Dc chloro10+11 prep



Figure S11: ¹³C NMR spectrum of 2, recorded in benzene-*d*₆, 125 MHz.

Sample Ref Dc chloro10+11 prep



Figure S12: DEPT-135 spectrum of 2, recorded in benzene-*d*₆, 125 MHz.





Figure S13: HMQC spectrum of 2, recorded in benzene-d₆.





Figure S14: HMBC spectrum of 2, recorded in benzene-*d*₆.





Figure S15: COSY spectrum of 2, recorded in benzene-d₆.

no.	¹ H ¹³ C		²J	3Ј
1 (2H)	4.19 (t, <i>J</i> = 6.5)	64.8	C-9'	C-3
2 – 3 (4H)	1.71 – 1.60 (m)	20.0 - 28.0		C-1
2 - 3 (411)	overlapped	29.9 - 20.9		0-1
4 (24)	1.41 – 1.25 (m)	26.2		
4 (211)	overlapped)	20.2		
5 27 (464)	1.41 – 1.25 (m)	20.0 28.0		C-4, C-28
5-27 (466)	overlapped)	29.9 – 20.9		
28 – 29 (4H)	1.71 – 1.60 (m)	24.0	0.00	C-32
	overlapped	24.9	C-30	
30 – 31 (4H)	2.34 (t, <i>J</i> = 7.5)	33.9	C-32	C-28
32		178.4		
1'		127.4		
<u>.</u> ,	7.04 (d, <i>J</i> = 2.0)	109.5	C-1', C-3'	C-7', C-4',
2				C-6', C-5'
3'		148.1		
4'		146.9		
5'	6.92 (d, <i>J</i> = 8.3)	114.9	C-6', C-4'	C-1'
6'	7.07 (dd, <i>J</i> = 8.3, 2.0)	123.2	C-5'	C-2', C-7'
7'		144.8	C8'	C-2', C-6',
	7.62 (d, <i>J</i> = 15.8)			C-9'
8'	6.31 (d, <i>J</i> = 15.8)	115.9	C9', C-7'	C-1'
9'		167.6		
O <u>CH</u> ₃ – 4'	3.93 (s)	56.1	C-4'	

Table **S**2: ¹H NMR data (500 MHz; multiplicities and coupling constants), ¹³C NMR data (125 MHz) and HMBC correlations of **3**, recorded in CDCl₃.

[chemical shift in ppm; coupling constants (Hz); multiplicity of proton signals: s; singlet, d; doublet, t; triplet, m; multiplet, dd; doublet of doublets]



Figure S16: ¹H NMR spectrum of 3, recorded in chloroform-*d*, 500 MHz.



Figure S17: ¹³C NMR spectrum of 3, recorded in chloroform-d, 125 MHz.



Figure S18: DEPT-135 spectrum of 3, recorded in chloroform-*d*, 125 MHz.



Figure S19: HMQC spectrum of 3, recorded in chloroform-d.



Figure S20: HMBC spectrum of 3, recorded in chloroform-d



Figure S21: COSY spectrum of 3, recorded in chloroform-d.

Position	¹ H	¹³ C	² J	³ J	¹³ C CDCl₃, 125 MHz
1		149.3			149.1
2		133.9			133.8
3		152.3			152.1
4	6.26 (d, <i>J</i> = 1.8)	104.6	C-3, C-5	C-6, C-	104.5
				7	
5		138.5			138.2
6	6.50 (d, <i>J</i> = 1.8)	108.0	C-1	C-4	107.8
7	2.84, 2.90 (m)	36.5	C-5, C-8	C-6	36.8
8	2.80, 2.87 (m)	32.4	C1', C-2'	C-6'	32.2
1'		127.9			127.8
2'		153.7			153.5
3'	6.76 (d, <i>J</i> = 7.5)	115.5	C-2'		115.4
4'	6.86 (ddd, <i>J</i> = 7.5,	121.0		C-2'	120.9
	7.0, 1,0)				
5'	7.09 (dd,	127.5	C-6'		127.3
	unresolved)				
6'	7.09 (d, <i>J</i> = 7.5),	130.5		C-2'	130.4
	overlapped				
О <u>СН</u> з —	3.87 (s)	61.2		C-2	61.0
2					
O <u>CH</u> ₃ –	3.80 (s)	56.0		C-3	55.8
3					
0 <u>H</u> – 1	5.73 (brd)				
0 <u>H</u> – 2'	4.72 (brd)				

Table S3: ¹H NMR data (500 MHz; multiplicities and coupling constants), ¹³C NMR data (125 MHz) and HMBC correlations of **4**, recorded in CDCl₃.

[chemical shift in ppm; coupling constants (Hz); multiplicity of proton signals: s; singlet, d; doublet, m; multiplet, brd; broad; dd; doublet of doublets]



Figure S22: ¹H NMR spectrum of 4, recorded in chloroform-*d*, 500 MHz.



Figure S23: ¹³C NMR spectrum of 4, recorded in chloroform-*d*, 125 MHz.



32.40

Figure S24: DEPT-135 spectrum of 4, recorded in chloroform-*d*, 125 MHz.

125 120 115 110 105 100

ppm



Figure S25: HMQC spectrum of 4, recorded in chloroform-*d*.

Sample Ref Ds chloro6a cc10 cpd1



Figure S26: HMBC spectrum of 4, recorded in chloroform-*d*.

Sample Ref Ds chloro6a cc10 cpd1



Figure S27: COSY spectrum of 4, recorded in chloroform-*d*

Sample Ref S-MTPA-Cl Dc8b4



Figure S28: ¹H NMR spectrum of the (*R*)-MPTA ester of **1**.

Sample Ref R-MPTA-Cl DC8b4



Figure S29: ¹H NMR spectrum of the (*S*)-MPTA ester of **1**.